

Thr Ser Ser Ser Glu Glu Ala Arg Ser Gly Arg Val Thr Ile Arg Asp			
75	80	85	
cat cca gac aac ctc acc ttc aca gtg acc tat gag agc ctc acc ctg			462
His Pro Asp Asn Leu Thr Phe Thr Val Thr Tyr Glu Ser Leu Thr Leu			
90	95	100	105
gat gat gca gac acc tac atg tgt gcg gtg gat ata cca ttt ttc aat			510
Asp Asp Ala Asp Thr Tyr Met Cys Ala Val Asp Ile Pro Phe Asn			
110	115	120	
gcc ccc ttg ggg ctc gat aag tac ttc aag att gaa ttg tct gtg gtt			558
Ala Pro Leu Gly Leu Asp Lys Tyr Phe Lys Ile Glu Leu Ser Val Val			
125	130	135	
cca agt gag gac cca gtt tca tct cca gga cca aca cta gag aca cct			606
Pro Ser Glu Asp Pro Val Ser Ser Pro Gly Pro Thr Leu Glu Thr Pro			
140	145	150	
gtg gtg tcc acc agt ctg cct acc aag ggt ccc gcc cta gga tcc aac			654
Val Val Ser Thr Ser Leu Pro Thr Lys Gly Pro Ala Leu Gly Ser Asn			
155	160	165	
aca gag gac cgc cgt gag cat gac tat tcc cag ggc ttg agg ctc cca			702
Thr Glu Asp Arg Arg Glu His Asp Tyr Ser Gln Gly Leu Arg Leu Pro			
170	175	180	185
gcg ctg ttg tct gtg tta gct ctc ctg ctg ttt ctg ttg gtg ggg aca			750
Ala Leu Leu Ser Val Leu Ala Leu Leu Leu Phe Leu Leu Val Gly Thr			
190	195	200	
tct ctg ctg gcc tgg agg atg ttc cag aag cgg ctg gtc aaa gct gat			798
Ser Leu Leu Ala Trp Arg Met Phe Gln Lys Arg Leu Val Lys Ala Asp			
205	210	215	
agg cat cca gag ctg tcc cag aac ctc aga cag gct tct gag cag aat			846
Arg His Pro Glu Leu Ser Gln Asn Leu Arg Gln Ala Ser Glu Gln Asn			
220	225	230	
gag tgc cag tat gtg aat ttg cag ctg cac acg tgg tct ctg agg gaa			894
Glu Cys Gln Tyr Val Asn Leu Gln Leu His Thr Trp Ser Leu Arg Glu			
235	240	245	
gag ccg gtg cta cca agt cag gta gaa gtg gtg gaa tat agc aca ttg			942
Glu Pro Val Leu Pro Ser Gln Val Glu Val Val Glu Tyr Ser Thr Leu			
250	255	260	265
gca tta ccc cag gaa gag ctt cac tat tca tcc gtg gca ttc aac tcc			990
Ala Leu Pro Gln Glu Leu His Tyr Ser Ser Val Ala Phe Asn Ser			
270	275	280	
cag agg cag gat tct cac gcc aat gga gat tct ctt cat caa cct cag			1038
Gln Arg Gln Asp Ser His Ala Asn Gly Asp Ser Leu His Gln Pro Gln			
285	290	295	
gac cag aaa gca gag tac agt gag atc cag aag ccc aga aaa gga ctc			1086
Asp Gln Lys Ala Glu Tyr Ser Glu Ile Gln Lys Pro Arg Lys Gly Leu			

300

305

310

tct gac ctt tac ctg tga ctccttgta cctgatcctc tcagtggta	1134
Ser Asp Leu Tyr Leu	
315	
ctaccagggtt ccaaggctcc ctgctggctg ctgcctcaa tgtcatgagc ctcagtggt	1194
tcactaaaga tgagcaggag ccagggtct gtgggcacag ttcatccca ctggctct	1254
cctcttagcc tgtatttgt tctgcctctg ggtgtggaag acatcgatgc tgctcttt	1314
ggctctggg aattgacatg gtcgtatag aacggtactt gtgttagtta gctttgt	1374
gtcagtcag gaagaacatc tgtggtaact gggaaagtgg gggacccatg agactacaaa	1434
ggaaggggag tcatggaggt actaaacacc aactcctca tctcacagag aaaaaaacct	1494
aagctctgag gacaaaagcc tggccgtgg caccaaggc aggggcaaat tcctctggac	1554
tcattttat ttttattttt tggttttga gacagggtct ctctgtgt tag cttggctgt	1614
cctggaactc actctgtaaa ccagaatggc ctcagactca caaagatctg cctgcctctg	1674
cctccaaagg tgtgtgccac aatgcctggc ttctctgaat tcttaagtaa aagatgaaat	1734
aaagtttata atatctt	1752

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 <211> 318
 <212> PRT
 <213> Mus musculus

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Leu Leu Leu Phe Trp Leu Pro Gly Cys Val Pro Leu His Gly Pro Ser
 20 25 30

Thr Met Thr Gly Ser Val Gly Gln Ser Leu Ser Val Ser Cys Gln Tyr
 35 40 45

Glu Glu Lys Phe Lys Thr Lys Asp Lys Tyr Trp Cys Arg Gly Ser Leu
 50 55 60

Lys Val Leu Cys Lys Asp Ile Val Lys Thr Ser Ser Ser Glu Glu Ala
 65 70 75 80

Arg Ser Gly Arg Val Thr Ile Arg Asp His Pro Asp Asn Leu Thr Phe
 85 90 95

Thr Val Thr Tyr Glu Ser Leu Thr Leu Asp Asp Ala Asp Thr Tyr Met
 100 105 110

Cys Ala Val Asp Ile Pro Phe Phe Asn Ala Pro Leu Gly Leu Asp Lys

115	120	125
Tyr Phe Lys Ile Glu Leu Ser Val Val Pro Ser Glu Asp Pro Val Ser		
130	135	140
Ser Pro Gly Pro Thr Leu Glu Thr Pro Val Val Ser Thr Ser Leu Pro		
145	150	155
160		
Thr Lys Gly Pro Ala Leu Gly Ser Asn Thr Glu Asp Arg Arg Glu His		
165	170	175
Asp Tyr Ser Gln Gly Leu Arg Leu Pro Ala Leu Leu Ser Val Leu Ala		
180	185	190
Leu Leu Leu Phe Leu Leu Val Gly Thr Ser Leu Leu Ala Trp Arg Met		
195	200	205
210		
Phe Gln Lys Arg Leu Val Lys Ala Asp Arg His Pro Glu Leu Ser Gln		
215	220	
Asn Leu Arg Gln Ala Ser Glu Gln Asn Glu Cys Gln Tyr Val Asn Leu		
225	230	240
235		
Gln Leu His Thr Trp Ser Leu Arg Glu Glu Pro Val Leu Pro Ser Gln		
245	250	255
Val Glu Val Val Glu Tyr Ser Thr Leu Ala Leu Pro Gln Glu Glu Leu		
260	265	270
270		
His Tyr Ser Ser Val Ala Phe Asn Ser Gln Arg Gln Asp Ser His Ala		
275	280	285
285		
Asn Gly Asp Ser Leu His Gln Pro Gln Asp Gln Lys Ala Glu Tyr Ser		
290	295	300
300		
Glu Ile Gln Lys Pro Arg Lys Gly Leu Ser Asp Leu Tyr Leu		
305	310	315
315		

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<211> 687
<212> DNA
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<220>
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<222> (1)..(687)

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Met Ile Pro Arg Val Ile Arg Leu Trp Leu Pro Ser Ala Leu Phe Leu		
1 5 10 15		
tct cag gtc cca ggc tgt gtc cca ctg cat ggc ccc agc act atc aca		96
Ser Gln Val Pro Gly Cys Val Pro Leu His Gly Pro Ser Thr Ile Thr		
20 25 30		

ggc gct gtt ggg gaa tcg ctc agt gtg tca tgt caa tac gag gag aaa	144
Gly Ala Val Gly Glu Ser Leu Ser Val Ser Cys Gin Tyr Glu Glu Lys	
35 40 45	
ttc aag act aag gac aaa ttc tgg tgc aga ggg tca ctg aag gta ctc	192
Phe Lys Thr Lys Asp Lys Phe Trp Cys Arg Gly Ser Leu Lys Val Leu	
50 55 60	
tgt aaa gat att gtc aag acc agc agc tca gaa gaa gtt agg aat ggc	240
Cys Lys Asp Ile Val Lys Thr Ser Ser Glu Glu Val Arg Asn Gly	
65 70 75 80	
cga gtg acc atc agg gac cat cca gac aac ctc acc ttc aca gtg acc	288
Arg Val Thr Ile Arg Asp His Pro Asp Asn Leu Thr Phe Thr Val Thr	
85 90 95	
tat gag agc ctc acc ctg gag gat gca gac acc tac atg tgt gcg gtg	336
Tyr Glu Ser Leu Thr Leu Glu Asp Ala Asp Thr Tyr Met Cys Ala Val	
100 105 110	
gat ata tca ctt ttt gat ggc tcc ttg ggg ttc gat aag tac ttc aag	384
Asp Ile Ser Leu Phe Asp Gly Ser Leu Gly Phe Asp Lys Tyr Phe Lys	
115 120 125	
att gag ttg tct gtg gtt cca agt gag gac cca gtc aca ggt tcg agc	432
Ile Glu Leu Ser Val Val Pro Ser Glu Asp Pro Val Thr Gly Ser Ser	
130 135 140	
ctt gag agt ggt aga gat atc ctg gaa tcc ccc aca tcc tca gtt ggg	480
Leu Glu Ser Gly Arg Asp Ile Leu Glu Ser Pro Thr Ser Ser Val Gly	
145 150 155 160	
cac act cat ccc agt gtg acc aca gat gac aca att cct gct ccc tgc	528
His Thr His Pro Ser Val Thr Thr Asp Asp Thr Ile Pro Ala Pro Cys	
165 170 175	
cct cag cct cgg tct ctt cgg agc agc ctc tac ttc tgg gtc ctg gtg	576
Pro Gln Pro Arg Ser Leu Arg Ser Ser Leu Tyr Phe Trp Val Leu Val	
180 185 190	
tct ctg aag ttg ttc ctg ttc agc atg ctt ggt gct gtc ctc tgg	624
Ser Leu Lys Leu Phe Leu Phe Leu Ser Met Leu Gly Ala Val Leu Trp	
195 200 205	
gtg aac agg cct cag agg tgc tct ggg gga agc agc act cag ccc tgt	672
Val Asn Arg Pro Gln Arg Cys Ser Gly Gly Ser Ser Thr Gln Pro Cys	
210 215 220	
tat gag aac cag tga	687
Tyr Glu Asn Gln	
225	

<210> 4
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<212> PRT
<213> Mus musculus

<400> 4
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 Ser Gln Val Pro Gly Cys Val Pro Leu His Gly Pro Ser Thr Ile Thr
 20 25 30

 Gly Ala Val Gly Glu Ser Leu Ser Val Ser Cys Gln Tyr Glu Glu Lys
 35 40 45

 Phe Lys Thr Lys Asp Lys Phe Trp Cys Arg Gly Ser Leu Lys Val Leu
 50 55 60

 Cys Lys Asp Ile Val Lys Thr Ser Ser Ser Glu Glu Val Arg Asn Gly
 65 70 75 80

 Arg Val Thr Ile Arg Asp His Pro Asp Asn Leu Thr Phe Thr Val Thr
 85 90 95

 Tyr Glu Ser Leu Thr Leu Glu Asp Ala Asp Thr Tyr Met Cys Ala Val
 100 105 110

 Asp Ile Ser Leu Phe Asp Gly Ser Leu Gly Phe Asp Lys Tyr Phe Lys
 115 120 125

 Ile Glu Leu Ser Val Val Pro Ser Glu Asp Pro Val Thr Gly Ser Ser
 130 135 140

 Leu Glu Ser Gly Arg Asp Ile Leu Glu Ser Pro Thr Ser Ser Val Gly
 145 150 155 160

 His Thr His Pro Ser Val Thr Thr Asp Asp Thr Ile Pro Ala Pro Cys
 165 170 175

 Pro Gln Pro Arg Ser Leu Arg Ser Ser Leu Tyr Phe Trp Val Leu Val
 180 185 190

 Ser Leu Lys Leu Phe Leu Phe Leu Ser Met Leu Gly Ala Val Leu Trp
 195 200 205

 Val Asn Arg Pro Gln Arg Cys Ser Gly Gly Ser Ser Thr Gln Pro Cys
 210 215 220

 Tyr Glu Asn Gln
 225

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 <212> DNA
 <213> Artificial

 <220>
 <223> Artificially Synthesized Primer Sequence

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gggggtggac catcctcta

19

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<211> 20
<212> DNA
<213> Artificial

<220>
<223> Artificially Synthesized Primer Sequence

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cgcgtagctg taaacggtag

20